

“Financial Risk and Crisis Management after
the Global Financial Crisis” Series No.8 (5/2016)

The IMF as a Global Framework for Currency and Financial Crisis Management¹

Junko Koedaⁱ

Associate Professor, Faculty of Political Science and Economics,
Waseda University

¹ This document is an English translation of the original Japanese, which appears in the May 2016 edition of The Japan Economic Research Institute Monthly Report, published by The Japan Economic Research Institute.

1. Introduction

The International Monetary Fund (IMF) plays a critical role as a crisis manager from a global standpoint, as an international lender of last resort (ILOLR) for international financial systems during currency and financial crises. Because the IMF plays such a critical role, it is subject to the judgment of global society whenever a crisis occurs, and its problems come into clear view. What types of issues is the IMF's crisis management framework currently dealing with then?²

ILOLRs are not limited solely to the IMF. During the global financial crisis of 2008, the US Federal Reserve Board (FRB) came to play the role of a liquidity supplier. In addition, the European Central Bank (ECB) exerted greater influence as a liquidity provider during the Euro crisis, and the use of European regional financial arrangements such as the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM) also increased. Liquidity supply frameworks set up in Asia include the Chiang Mai Initiative (CMI) as well as its further multilateralization among the ASEAN+3 nations. Therefore, in what ways does the IMF differ from other ILOLRs, and in what ways is it related to them?

This research series has already discussed the roles of the FRB's currency swap agreements (#1, #7) and regional financial cooperation in Asia (#6). This paper will discuss the characteristics of and issues involved in the IMF's crisis management framework and contrast it with the other ILOLRs.

2. The Role of an International Lender of Last Resort: Theoretical Background³

In theory, no consensus has actually been reached as to whether an international lender of last resort (ILOLR) is even necessary. Depending on the assumptions of any given model, one may conclude that an ILOLR should have an unlimited supply of funds at its disposal or that it would be better to do away with ILOLRs completely. Other models fall between these two extreme perspectives.

² This paper does not seek to provide a new analysis; instead it focuses on introducing and dissecting existing research and discussions. Also, although the paper primarily discusses the IMF, those wishing for a more general view on the institutional design of international financial system should refer to papers such as Fukuda (2005).

³ This section introduces the current discussion, with reference to Chapter 3 of Roubini and Setser (2004).

The conclusion that an “unlimited” supply of funds (or an ample amount that can fully cover any possible liquidity gap) is necessary complies with classic theoretical models that take liquidity crises into consideration (e.g., Chang and Velasco, 1999⁴). The term “liquidity crisis” here refers to such situations as the one that South Korea faced during the 1997 Asian currency crisis. At the time, even though South Korea had relatively stable fundamentals, speculative behavior on the part of investors—whereby they attempted to convert won-denominated short-term investments into dollar-denominated equivalents—dragged the nation into crisis.⁵ However, according to this model, if an ILOLR capable of supplying enough funds to cover the liquidity gap had existed, this type of speculative behavior would never have occurred. In other words, if an ILOLR could rapidly provide unlimited funding, it could help avert a liquidity crisis. Therefore, a total bailout would be the ideal scenario, which would imply that ILOLRs should be strengthened.

In contrast, the conclusion that ILOLRs should be done away with is often built on the fundamental concept of lenders’ and borrowers’ risks. Classical arguments point out that the insurance function of an ILOLR results in increased moral hazard for both lenders and borrowers (in this case, the incentive to take excessive risk). Even if this problem of moral hazard does not fully substantiate the extreme argument of abolishing ILOLRs, it does contribute to arguments that preach caution with regard to strengthening ILOLRs.

However, if ILOLRs were to be abolished, what sort of response could be mounted in the event of a financial crisis? Nations could guard against crises by increasing their reserves, but the act of holding these reserves would be, in itself, an opportunity cost. It is also conceivable to rely on private-sector funds, but it is often the case that there are not enough private institutions to supply sufficient liquidity on a global scale in the midst of crises.

Between the two extreme schools of thought regarding ILOLRs—abolition and provision of unlimited funds—sit other theoretical models that, for example, advocate the efficacy of partial bailouts in cases wherein crises are

⁴ The model used by Chang and Velasco (1999) takes the domestic lender of last resort function from the model used by Diamond and Dybvig (1983) and applies it to an open economy. Investors’ attempts to convert domestic currency-denominated short-term debt into a foreign currency cause a liquidity crisis, which then turns into a currency crisis. This mechanism differs from that of Diamond and Dybvig (1983), according to which liquidity problems arise because of banks’ proclivity for short-term borrowing and long-term lending, which induces low liquidity.

⁵ See Ogawa (2000), Ito (2007), and others for detailed accounts.

brought on not only by liquidity problems but also by weak fundamentals (e.g., Corsetti, Guimaraes and Roubini, 2006). Since this approach allows for crisis prevention through public funding and political efforts, it is consistent with the view that the ILOLR plays a critical role as a crisis manager.

3. The Characteristics of IMF Financing

In view of the perspectives discussed, what types of funding does the IMF actually supply and is it actually engaging in crisis management? Specific terminologies such as quotas, special drawing rights (SDRs), conditionality, and so on are often used in this context by the IMF. In this section, we will introduce such terms and describe the characteristics of IMF financing. Specifically, we will discuss funding formats, the scale of funding, and funding conditions.⁶ We will then compare the IMF with other ILOLRs in the next section.

Funding Format: Public Currency Swaps

IMF funding occurs entirely through currency-claim rights known as SDRs. As SDRs themselves are not liquid assets, they must be converted into specific currencies when making loans. Under the SDR mechanism, IMF-specified and voluntary participant nations provide “freely usable currencies” that can be exchanged for SDRs. Since only public entities can hold SDRs, such exchanges are conducted through government transactions and not through the markets.

Although this IMF funding format is unique, it can be considered a type of public currency swap framework—one that has 188 participating nations. Because a significant subset of nations will not feel the effects of a crisis at any given point, a stable supply of funds can be provided.

The structure of the currency basket that determines the SDR’s value is revised once every five years to reflect the relative importance of each currency in the global trade and financial systems. Table 1 shows the change over time in the weights of each currency in the basket. Although the freely usable currencies that are currently incorporated include the US dollar, the Euro, the Japanese yen, and the British pound, the Chinese renminbi is to be added to the basket in October 2016 with the third-largest weighting behind the US dollar and the Euro. This step is in line with the forecast that China’s share of the global GDP is expected to grow in the future. For example, the

⁶ See Okamura, ed. (2009) for a detailed discussion of the IMF’s setup in this regard.

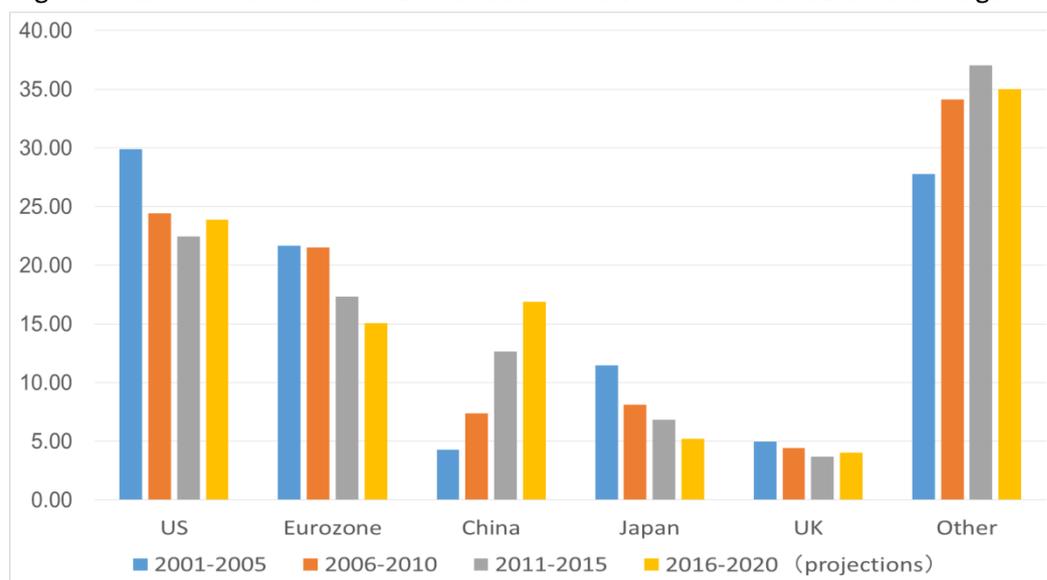
IMF's World Economic Outlook predicts that China's GDP will outstrip the Eurozone's over the next five years (2016–2020) (Figure 1).

Table 1. Composition of the Currency Basket for SDR Valuation (%)

	2001-2005	2006-2010	2011-2015	2016–2020 (Scheduled Weighting)
US	45	44	42	42
Eurozone	29	34	37	31
Japan	15	11	9	8
UK	11	11	11	8
China	0	0	0	11

Source: Expansion of material no. 8.5 from Okamura (ed., 2009) using data from the IMF website.

Figure 1. GDP of Nations with Currencies in the SDR Valuation as a Percentage of World GDP

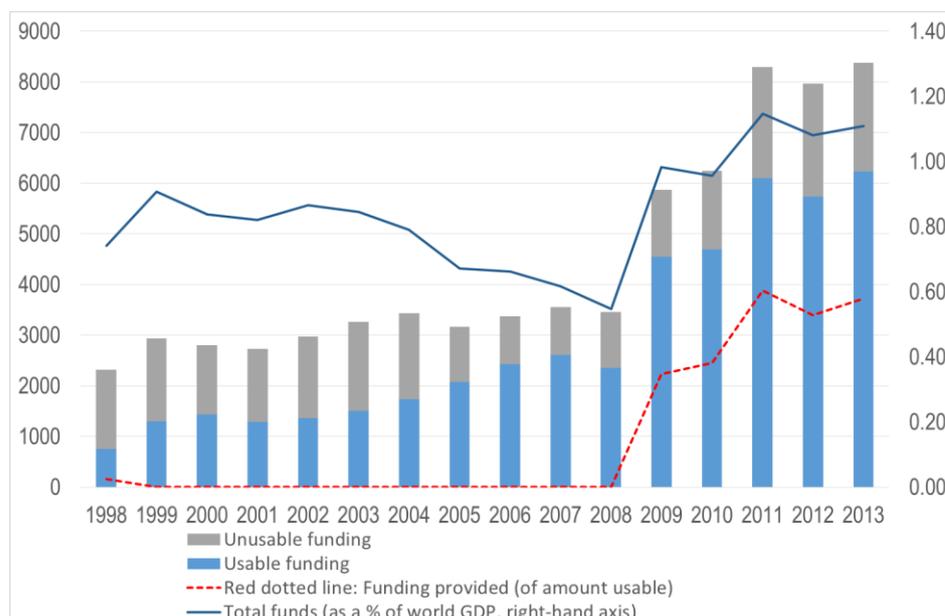


Source: Drafted from IMF World Economic Outlook (WEO) data.

Funding Scale: Financing and Capital Increases

The scale of IMF funding is dependent on either capital increases (quota) or financing from participant nations. A breakdown of the IMF's usable resources (see Figure 2) shows that during the 2008 global financial crisis, these resources played a critical role through their temporary expansion via financing. Quotas had been increased a number of times in the past, but quotas as a share of global GDP constantly declined.

Figure 2. Breakdown of Usable Funding from the IMF (in Hundreds of Millions of USD)



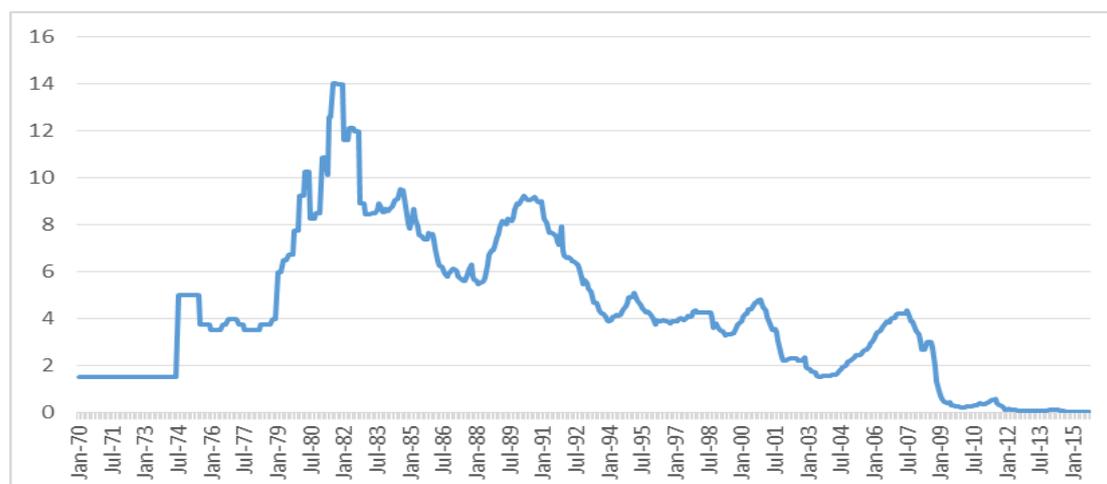
Source: Drafted from IMF website data. Year-end values.

The IMF's usable funding is less than 1% of global GDP (Figure 2). Some suggest that the IMF should strengthen its funding base by issuing more SDRs (e.g., Zhou, 2009). However, such funding is not limitless, as converting SDRs into liquid assets inevitably results in fiscal limitations for the nation providing the funding (Eichengreen, 2012).

Funding Conditions: Conditionality etc.

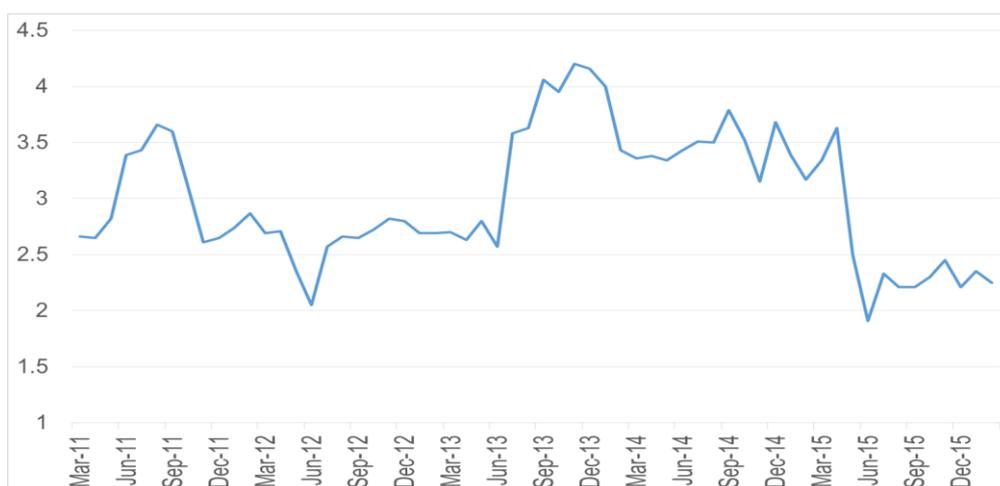
The IMF is the creditor with the highest seniority (priority of payment), but it does not accept collateral. As such, its lending rate, called the SDR interest rate, is determined on the basis of the weighted average of the freely usable currencies' short-term interest rates. Since short-term interest rates under a floating-rate regime are largely determined by fiscal policies, the SDR interest rate and its movement over time (see Figure 3) reflect the fiscal policies of the US, the EU, Japan, and the UK. Since these nations have recently been maintaining non-traditional fiscal policies, the SDR interest rate is reaching its lower limit of 0.05%. However, with China joining the currency basket this autumn and considering that the three-month rate on China's sovereign debt is above 2% (see Figure 4), the SDR interest rate could once again trend upward.

Figure 3. SDR Interest Rate over Time (Annual, %)



Source: Drafted from Data Stream. Monthly average values.

Figure 4. Benchmark Interest Rates for Three-Month Chinese Sovereign Debt (Annual, %)



Source: Drafted from Bloomberg generic interest rate (bid/offer) data. Month-end values.

In exchange for not being able to dictate how its loans must be used, the IMF sets various targets, or conditionalities, for macroeconomic policy. IMF conditionalities impose various constraints on borrower nations. First, if a nation does not meet certain benchmarks called “prior actions,” it will not receive IMF financing. In addition, if it does not fulfill “quantitative performance criteria” (QPCs), then funding will usually be discontinued. It is critical to impose the appropriate conditionality on a country and oblige it to commit to policies that are effective in bringing a crisis under control. This leads to a recovery in creditworthiness, thereby priming both private and other public funds. This is the key role of a crisis manager.

However, some distrust certainly exists with regard to IMF

conditionalities. In Asia, in particular, during the Asian currency crisis, the IMF's imposition of strict fiscal austerity measures on fiscally healthy countries (such as South Korea and Thailand) and the excessive imposition of structural conditionality (on Indonesia and others) that would not be necessarily critical to bringing the crisis under control led to an increased distrust of the IMF. In the years since the crisis, a deeply-rooted wariness has remained with respect to receiving IMF assistance, which is considered to be a stigma.⁷

To lessen this stigma, the IMF moderated its conditionalities. For example, it removed structural benchmarks from its QPCs (when funding is divided into installments, the next installment would usually not be provided unless these benchmarks were met) and only set applicable benchmarks that could be calculated from macro variables and other such data. It also established liquidity supply facilities (see the separate column on this) with no conditionality for countries with strong fundamentals.

Although these steps did moderate the IMF's conditionalities, the organization was more circumspect in its proactive use of prior actions with respect to countries with medium-term structural problems. For example, in the assistance it gave Greece during the Eurozone crisis, it attached four prior actions as conditions for approval of the extended fund facility.

4. Comparison with Other ILOLRs

How is the IMF similar to and different from other ILOLRs? This section compares the IMF with ILOLRs such as the Chiang Mai Initiative (CMI), the US Federal Reserve Board (FRB), and the European Stability Mechanism (ESM).⁸

Chiang Mai Initiative

Although the CMI, like the IMF, is a type of public currency swap framework, it only serves the ASEAN+3 area. Multilateral currency swaps (multilateralization) among the region's countries became possible in 2010, and at present, the available pool amounts to \$240 billion. The IMF was a factor leading to the CMI's establishment. This was because of the strong IMF stigma following the Asian currency crisis (see previous section), which

⁷ See Ito (2012) for a discussion on this stigma in Asia.

⁸ This paper does not discuss regional financial arrangements set up in other regions (e.g., the Arab Monetary Fund, Latin American Reserve Fund, and North American Framework Arrangement).

engendered regionalization regarding the international financial system in Asia. Still, if withdrawals from this pool exceed a certain level (called the IMF delinked portion), it is necessary to engage in the IMF program. Thus, it is one of the few ILOLRs with a definite link to the IMF.

So far, the CMI has never been implemented. Even in the global financial crisis of 2008, South Korea, which was facing liquidity problems, is said to have avoided using the CMI because of its link to the IMF program (Kawai, 2009). The IMF delinked portion was subsequently raised from 20% to 30% in 2014.

Federal Reserve Board

The FRB's currency swap agreements are part of a crisis management framework that is independent of the IMF. Executing a central bank currency swap agreement is ostensibly influenced by political factors, but having such an agreement provides a very readily available mechanism to the parties involved. Since lending conditions are predetermined, this system is highly regarded for its ability to provide same-day funding in the event of a crisis. Also, these lending conditions do not include conditionality of the type imposed by the IMF on macroeconomic policies.

Also, since the funding is provided by a central bank, which has currency-issuing authority, the supply can be unlimited. However, it is unlikely that a central bank would actually supply unlimited liquidity with no restrictions. In particular, the FRB could withhold funding because of political considerations or if it were concerned that easing would result in domestic inflation. When insufficient dollar liquidity became a problem during the 2008 global financial crisis, the FRB played a key role in supplying dollars; however, at that time, easing measures were a desirable form of monetary policy for the US.

European Stability Mechanism⁹

The European Stability Mechanism (ESM) is a regional financial arrangement set up to stabilize the Eurozone's financial system. Unlike the CMI, the ESM does not have any formal links with IMF programs. Still, as in the troika system of the IMF, the European Commission (EC), and the European Central Bank (ECB), the ESM cooperates with the IMF whenever possible.

⁹ Formerly the European Financial Stability Facility (EFSF), which coexisted with the ESM from October 2012 to June 2013.

Unlike a public currency swap framework, the ESM funds itself by issuing bonds in the market. Since these bonds are guaranteed by Germany and other EU nations with high credit ratings, it is possible to procure long-term financing with low-cost funds. As a result, the funding cost, known as the base rate, can be negative. By contrast, IMF loans cannot carry a negative interest rate because the SDR interest rate, on which such loans are based, has a 0.5% floor, and IMF loans tend to be relatively short term.¹⁰

After the ESM's establishment in October 2012, Greece, Cyprus, and Spain became ESM program nations. Among these three, Greece and Cyprus had also received IMF loans, but 80–90% of the funding they received was from the ESM and other European institutions (see Table 2).

When a country receives IMF financing, the IMF and the borrower sign a memorandum of understanding. However, in the troika system of the IMF, the EC, and the ECB, the IMF's performance criteria and the EC's quantitative targets are set in accordance with each other. Additionally, although the IMF focuses on short-term macroeconomic policy, the EC covers comprehensive medium-term structural reform (IMF, 2012). Therefore, in this type of cooperative structure, the issue is whether ILOLR peers can cooperate to provide an appropriate support package in a timely fashion.

If a country has not received IMF financing, the IMF's policy statements are not legally binding; therefore, the IMF's cooperation with the ESM is not an inevitable consequence. Spain did not receive support from the IMF during the Euro crisis, apparently because the country was concerned that receiving IMF support would increase the spreads on its sovereign debt and hurt its banks' balance sheets. It therefore accepted support from the ESM, which limits how such funding can be used, and injected the funds into its banking sector. A joint agreement between Spain's central bank and the EC determined the financial institutions that would receive the proceeds of the ESM financing. Although this agreement was ostensibly coordinated with the IMF, this particular case did not lead to the IMF having formal power of enforceability over policy implementation in Spain.

5. Conclusion: Issues in the IMF's Crisis Management Framework

This paper has considered the role of ILOLRs, described their theoretical context, and discussed the characteristics of the IMF and compared it with

¹⁰ However, financing from the extended fund facility and financing for low-income countries have longer maturities of 10 years.

other ILOLRs. So what issues have these discussions illuminated?

Eventually, it will become difficult for the IMF to provide “unlimited” funding because it cannot avoid fiscal limitations. The IMF has set up a more flexible lending framework in response to this issue. Specifically, the establishment of the Flexible Credit Line (FCL) in 2009 made it possible for the IMF to provide funding to countries with strong economic fundamentals without imposing access limits or conditionalities. So why has the FCL not been more actively used? Possible explanations for this include the lack of interest on the part of member countries and the rigorous loan qualification criteria (Reichmann and Resende, 2014). In theory, the very existence of a liquidity supply function can prevent a liquidity crisis; therefore, it is not necessarily accurate that the function is ineffective just because it is not used. However, the lending framework likely needs some further revisions. For example, it may be worthwhile for the IMF to enhance the FCL’s rapid-response capability by pre-approving all financing criteria or to set up a new framework in which loans could be provided to a number of countries simultaneously.

Even if the IMF is unable to provide unlimited funding, it can still fulfill a critical role as a “crisis manager” (Fisher, 1999). However, because the stigma of the IMF remains strong and other ILOLRs are increasing their presence, the IMF faces the challenge of providing a global perspective that transcends national and regional interests and of contributing to the implementation of appropriate policies. Further, enhancement of multilateral dialogue could also be effective, but dealing appropriately with the constantly changing global economy is a challenge. Also, even if the IMF is able to provide the right advice, it will not have any control regarding the policy execution of a country in crisis if that country has not requested IMF funding. In any event, therefore, the IMF’s policy surveillance activity has major limitations (Mussa, 1997).

[Column]

IMF Credit Lines

In theory, an ILOLR can prevent a liquidity crisis if it is able to cover liquidity gaps through the rapid supply of sufficient funding (see Section 2). In line with this theory, the IMF has, in fact, established and enhanced credit lines for countries with strong fundamentals and good track records. The IMF currently provides two types of credit lines: the Flexible Credit Line (FCL) and the Precautionary and Liquidity Line (PLL).

The FCL is a renewable credit line for countries with strong fundamentals and good track records. Countries eligible for the FCL do not have any conditionality or a maximum access limits (as determined by their quota share), and they can receive all the funds upfront in a lump sum. On the other hand, countries that do not meet FCL criteria but have relatively stable fundamentals are eligible for the PLL. For these countries, the access limit is set at 1000% of the borrower's quota on a cumulative basis.

The FCL first came into existence in March 2009. At the time of the 2008 global financial crisis, the IMF had only one available liquidity provision facility, which had a 500% access limit.* At that time, countries that were facing liquidity problems did not utilize the IMF; instead they relied on the FRB for liquidity supply.

However, even after the establishment of the FCL/PLL, few countries have applied for credit lines from the IMF. As of the time of writing this paper (May 2016), the only countries that have applied for the FCL are Mexico, Colombia, and Poland, whereas Morocco is the only one that has applied for the PLL.

*For more on credit lines before the 2008 global financial crisis, see Ogawa (2000).

Reference

- [1] Okamura, Kenji, ed., 2009. *Kokusai kinyu kiki to IMF* [The International Financial Crisis and the IMF], Okura Zaimu Kyokai.
- [2] Ogawa, Eiji, 2000. "Ajia tsuka kiki to IMF no taio" [The Asian Currency Crisis and the IMF's Response], in Uzawa, Hirofumi and Masaharu Hanazaki, eds., *Kinyu shisutemu no keizaigaku: shakaiteki kyotsu shihon no kanten kara* [Financial System Economics: From the Perspective of Social Shared Capital], University of Tokyo Press.
- [3] Fukuda, Shinichi, 2005. "Atarashii kokusai kinyu shisutemu no seido sekkei ni mukete" [Toward an Institutional Design for a New International Financial System], in Fukuda, Shinichi and Eiji Ogawa, eds., *Naze kinyu kiki ha okoru no ka* [Why Do Financial Crises Happen?], University of Tokyo Press.
- [4] Chang, Roberto and Andrés Velasco, 2000. "Liquidity Crises in Emerging Markets: Theory and Policy," NBER Chapters, in: NBER Macroeconomics Annual 1999, Volume 14, pages 11-78 National Bureau of Economic Research, Inc.
- [5] Corsetti, Giancarlo and Bernardo Guimaraes and Nouriel Roubini. 2006. "International lending of last resort and moral hazard: A model of IMF's catalytic finance," *Journal of Monetary Economics*, Elsevier, vol. 53 (3) , pages 441-471..
- [6] Diamond, D. W. and P. H. Dybvig. 1983. "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy*, University of Chicago Press, vol. 91 (3) , pages 401-19.
- [7] Eichengreen, Barry. 2012. "International Liquidity in a Multipolar World," *American Economic Review: Papers & Proceedings*, American Economic Association, vol. 102 (3) , pages 207-12.
- [8] Fisher, Stanley. 1999. "On the Need for an International Lender of Last Resort", *Journal of Economic Perspectives*. Fall 1999, Volume 13, Number 4, pages 85-104.

- [9]IMF. 2011. Review of Conditionality
<https://www.imf.org/external/np/pp/eng/2012/061812.pdf>
- [10]Ito, Takatoshi. 2007. "Asian Currency Crisis and the International Monetary Fund, 10 Years Later: Overview," Asian Economic Policy Review, Japan Center for Economic Research, vol. 2 (1) pages 16-49.
- [11]Ito, Takatoshi. 2012. "Can Asia Overcome the IMF Stigma?" American Economic Review: Papers & Proceedings, American Economic Association, vol. 102 (3) , pages 198-202.
- [12]Kawai, Masahiro. 2010. "Reform Of The International Financial Architecture: An Asian Perspective," The Singapore Economic Review (SER) , World Scientific Publishing Co. Pte. Ltd., vol. 55 (01) , pages 207-242.
- [13]Mussa, Michael. 1997. "IMF Surveillance," American Economic Review, American Economic Association, vol. 87 (2) , pages 28-31.
- [14]Reichmann, Thomas, and Carlos de Resende. 2014. "The IMF's Lending Toolkit and the Global Financial Crisis," Background paper, Independent evaluation office of the IMF.
- [15]Roubini, Nouriel and Brad Setser. 2004. Bailouts or Bail-Ins? Responding to Financial Crises in Emerging Economies. Institute for International Economics.
- [16]Truman, Edwin M. 2013. "Asian and European Financial Crises Compared," Working Paper Series WP13-9, Peterson Institute for International Economics.
- [17] Zhou, Xiaochuan. 2009. "Reform of the International Monetary System," Beijing: People's Bank of China. Available at www.pbc.gov.cn/english

ⁱ [Profile: Junko Koeda]

Associate Professor, Faculty of Political Science and Economics, Waseda University
(Applied Macroeconomics, Applied Finance, International Finance)

Graduated from the Faculty of Economics, University of Tokyo. Earned her Ph.D. from UCLA. Worked as an economist at the International Monetary Fund's headquarters in Washington, DC, and as a project assistant professor at the University of Tokyo's Graduate School of Economics and Faculty of Economics before assuming her current position in 2014.

Major Works

"A Debt Overhang Model for Low-Income Countries," *IMF Staff Papers*, Vol. 55 (4), 2008.

"Endogenous monetary policy shifts and the term structure: Evidence from Japanese government bond yields," *Journal of the Japanese and International Economies*, Vol. 29 (C), 2013.

"Exiting from QE," with Fumio Hayashi, NBER Working Papers 19938, National Bureau of Economic Research, Inc., 2014.